ERIC Document Resume	See Instruction Sheet	DATE OF RESUME 6/18/65	DATE RECEIVED

A. PUBLICATION DATA

1. ERIC NUMBER	2. ORIGINATOR CONTROL NO(S).	3. IDENTIFICATION NO.
ED000070	7408	N.A.

4. AUTHOR(S):
Stecklein, John E.

5. TITLE OF DOCUMENT ABSTRACTED:
Research on the Faculty

6. PUBLICATION TITLE:
College Self Study, Chapter VII

7. EDITOR(S):
N.A.

8. PLACE OF ORIGIN
ORG. WICHE
ST. Fleming Law Bldg. Univ. of Colo.
CITY, STATE Boulder, Colo
TELE. EXT.
INST/LOC CODE

9. PUBLISHER OR SOURCE
Western Interstate Commission for Higher Education

10. VOL.	11. PAGES	12. MO./YR.	13. TOTAL PP.
N.A.	69-88	59	20

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TYPE OF REPORT
PROPOSAL ☐
IN-PROGRESS ☐
FINAL ☒
FOLLOW-UP ☐

OTHER ERIC REFERENCES:

ERIC SATELLITE CODE

B. INDEXING DATA

14. SUBJECT AREA

15. TYPE OF ENDEAVOR
self-study

16. INDEXING TERMS (6-12)

teachers	recruitment
characteristics	retention
teaching loads	teaching benefits

17. ABSTRACT (MAX. 250 WORDS)

Briefly describes several types of research studies dealing with faculty. The studies discussed—all conducted at the University of Minnesota—are concerned with faculty characteristics, faculty work load, and faculty attraction and retention. With few exceptions, the studies were sponsored by all-university committees, or by committees representing the University Senate.

ERIC No.

18. SOURCE OF ABSTRACT

C. FUNDING DATA

19. SUPPORTING ORGANIZATION	20. DIVISION OR DEPT.	21. CONTRACT NO. / PROJECT NO.
	22. TOTAL COST OF PROJECT	
	23. DURATION OR PROJECT	U.S. Department of Health, Education, and Welfare Office of Education

ERIC Form 1

College Self Study
WICHE

VII. Research on the Faculty

John E. Stecklein

U. S. DEPARTMENT OF HEALTH, EDUCATION AND WELFARE
Office of Education

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I will discuss studies of the faculty and educational research carried on by the faculty in the context of a "case study" of the role of the Bureau of Institutional Research in a large, state-supported university.[1] This may give some insight into the process of formulating a research study by the Bureau, the role of the Bureau in the development and conduct of the research, the purposes of the studies, and the techniques used. In a few instances, I will discuss the utilization of the data obtained from the research study and will present some of the findings wherever they seem most interesting and as time permits.

Although this approach to the topic may appear to be somewhat provincial, I felt that you would gain more from a discussion of specific research studies conducted in a specific institution, than you would if I attempt to discuss broad aspects of studies of the faculty or to give you a kaleidoscopic overview of studies conducted by institutions throughout the country.

Faculty Characteristics

I am sure you have all heard expressions such as "the faculty is the heart of the university," or "the quality of a college is determined by the quality of the faculty." If, as stated, faculty members are the heart of a university, it should follow that how well an institution serves its function of teaching, research, and service is mirrored in the utilization of its faculty resources. As Dean Russell M. Cooper, a former chairman of the Senate Committee on Institutional Research at Minnesota once said, "...self knowledge is as fundamental to a University as it is to a person."

But for an institution to appraise its quality using the indirect measure of faculty quality, it is necessary that the characteristics of the faculty be known and that these be skillfully analyzed to determine general excellence. In addition to studies of quality characteristics of faculty, any alert institution which has reached the size where the president can no longer know his staff intimately, needs to have available periodically a descriptive overview of the nature of

[1]This chapter and the following chapter were originally given as one lecture.

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the faculty. Aside from its descriptive and informative value, such a periodic analysis can provide valuable data for the control of quality of faculty in terms of long range hiring and expansion programs. The people responsible for hiring new faculty need to know about such factors as inbreeding, age distribution, rank distribution, and types of research interests or publications of their current faculty.

Let me illustrate some of the kinds of information that can be made available by a careful analysis of the characteristics of a university faculty, by referring to a 1953 study of faculty characteristics at the University of Minnesota. This study, as well as the two previous ones made in 1931 and 1943, was motivated by faculty interest and conducted by a faculty group rather than emanating from the desire of a university administrator to collect such data. The value of a series of such studies can be sensed immediately, I believe, because, although it is valuable to have a picture of an institution's faculty at any given point of time, it is even more important to compare characteristics, trends, relationships, and welfare of a faculty group over a stretch of years.

Time permits only a few comments about the 1953 study. As with the 1931 study, this analysis evolved from a concern about inbreeding. One member of the Senate Committee on Institutional Research was convinced that inbreeding was bad, that the University of Minnesota staff was deeply inbred, and that the quality of the staff was therefore suffering. After considerable discussion and several meetings of a special advisory subcommittee, a study of inbreeding was set up which would incorporate a third, ten-year follow-up of the earlier faculty characteristics studies. The hypotheses to be tested were that there were no statistically significant differences between locally trained individuals and those individuals who were trained elsewhere, in terms of such things as average salaries, length of appointment prior to promotion, number of "dry" promotions, number of years at a particular rank, average annual salary increases, publication productivity, time and length of teaching experience, memberships in professional and learned societies, and off-campus professional obligations and awards. Data were also collected to determine which departments and colleges had the highest amounts of inbreeding.

As those of you who may have studied the problem of inbreeding know, some interesting problems of definition are immediately encountered when one tries to define a person as being inbred. For example, is a person inbred if he has received one degree, two degrees, or three degrees, from his employing institution? Is he inbred if he has received only his highest degree at the institution? Or should the definition be restricted so that he is considered inbred only if he receives his Ph.D. from the institution?

To see whether the definition would affect the results, special tabulations and comparisons were made using three possible definitions--Ph.D.'s earned, highest degree earned, and any degree earned at

Minnesota. Since no appreciable differences were noted in the comparative distributions made on these three bases, only one--one or more degrees from Minnesota--was used in the comparative analyses included in the final report.

Selected Tables from the 1950-51 Study

Approximately 70 pages of tables of faculty characteristics data emerged from the study as a whole. The tables in your notebooks were selected as representative of the data obtained in the study.

Inbreeding: --The distribution of faculty according to two possible definitions of inbreeding are shown in Tables 11 and 12. Table 11 shows the distribution in terms of number and per cent (for each rank) of individuals, for each of the colleges of the University of Minnesota, who held their doctorate degrees from Minnesota. Table 12 shows the proportions of Ph.D. holders teaching in each college of the University of Minnesota who held degrees from more than one institution. Thus from Table 11 it can be seen that for the University as a whole, 44 per cent of the individuals who held doctorates had received them from the University of Minnesota. Similarly, Table 12 shows that, of those individuals who held doctorate degrees, 65 per cent had degrees of some kind from more than one institution. Whether either of these figures represents a high or low level of inbreeding depends upon your attitude toward the matter.

Turnover: --In the 1931 study a measure of turnover was developed which was defined as the ratio of resignations or new appointments (whichever is smaller) to the total number of faculty at a given rank. Using this same index for the sake of comparability, turnover statistics were computed for each of the professorial ranks of the faculty for the years 1929-30, 1939-40, and 1949-50 as shown in Table 16. The turnover index at the assistant professor level and consequently for all professorial ranks combined, was found to be considerably higher in 1949-50 than it was for either of the two earlier years. Turnover indexes for professors tended to remain relatively stable over the 20-year span.

The Effect of Inbreeding: --Tables 22, 28, 33, and 36 in your notebook illustrate the kinds of data compared for persons who received one or more degrees at the University of Minnesota with those with no degrees from the University--identifiable measures of experience, numbers of research papers published, a combined publication index, and the receipt of salary increases concurrent with promotions in rank. Only a few statistically significant differences were found, in such things as length of academic experience prior to promotion (in favor of non-Minnesota degree holders) and length of time at a certain rank before promotion (Minnesota degree holders stayed longer than holders of degrees from other institutions).

TABLE 11. NUMBERS AND PERCENTAGES OF DOCTORATE HOLDING FULL-TIME ACADEMIC STAFF OF 1950-51 AT THE UNIVERSITY OF MINNESOTA WITH DOCTORATE FROM MINNESOTA, BY RANK AND COLLEGE.

College	RANK									
	Professor		Associate Professor		Assistant Professor		Instructor		All Ranks	
	N	%	N	%	N	%	N	%	N	%
Science, Literature and Arts	16	24	13	39	18	30	4	36	51	30
Institute of Technology	7	29	7	54	9	45	1	17	24	38
Agriculture	19	53	15	62	10	67	6	86	50	61
Medicine	15	48	11	58	9	53	16	70	51	57
Education	6	40	2	15	2	40	1	100	11	32
Duluth Branch	3	50	4	40	2	8	-	-	9	21
Other Colleges	20	62	2	22	5	56	1	100	28	55
All Colleges[a]	83	40	50	45	53	42	29	59	215	44

[a]Duluth Branch excluded.

TABLE 12. NUMBERS AND PERCENTAGES OF DOCTORATE HOLDING FULL-TIME ACADEMIC STAFF OF 1950-51 AT THE UNIVERSITY OF MINNESOTA WITH DEGREES FROM MORE THAN ONE INSTITUTION, BY RANK AND COLLEGE.

College	RANK									
	Professor		Associate Professor		Assistant Professor		Instructor		All Ranks	
	N	%	N	%	N	%	N	%	N	%
Science, Literature and Arts	48	71	24	73	48	80	7	64	127	74
Institute of Technology	15	62	8	62	14	70	3	50	40	63
Agriculture	22	61	16	67	10	67	4	57	52	63
Medicine	18	58	10	53	11	65	8	35	47	52
Education	13	87	11	85	3	60	1	100	28	82
Duluth Branch	4	67	8	80	16	64	1	50	29	67
Other Colleges	16	50	7	78	5	56	-	-	28	55
All Colleges[a]	132	64	76	68	91	72	23	47	322	65

[a]Duluth Branch excluded.

TABLE 16. TURNOVER BY PROFESSORIAL RANK AT THE UNIVERSITY OF MINNESOTA FOR THREE ACADEMIC YEARS: 1929-30, 1939-40 AND 1949-50.[a]

Year	RANK							
	Professor		Associate Professor		Assistant Professor		All Professorial Ranks	
	N	Turnover	N	Turnover	N	Turnover	N	Turnover
1929-30	155	1.9%	84	4.7%	159	5.7%	398	4.0%
1939-40	211	1.4	120	2.5	185	4.9	516	2.9
1949-50	246	1.6	165	4.2	219	7.8	630	6.7

[a]The turnover statistic (expressed as a percentage) is defined as the ratio of resignations or new appointments (whichever is smaller) to the total number of faculty at a given rank. Promotions are included in yearly totals but are not otherwise figured in yearly turnover. For example, during the year 1949-50, 246 individuals held full-time appointments as full Professor; of these, 4 were new appointments, and 16 appointments terminated during the year (2 resigned or were not reappointed, 10 retired, and 4 died). The turnover percentage is computed as $100(4 \div 246) = 1.6\%$, since the number of new appointments is less than the number of terminations.

Data for 1929-30 and 1939-40 from "Some Trends in Personnel Statistics of the Faculties of the University of Minnesota Relevant to Post-War Planning," September 1943. Table 1; Duluth Branch excluded.

TABLE 22. YEARS OF ACADEMIC EXPERIENCE OF 1950-51 FULL-TIME PROFESSORIAL STAFF MEMBERS AT THE UNIVERSITY OF MINNESOTA, BY RANK AND SOURCE OF DEGREE.[a]

Years of Academic Experience	RANK											
	Professor			Associate Professor			Assistant Professor			All Professorial Ranks		
	Univ. of Minn.	Other Institutions	Total	Univ. of Minn.	Other Institutions	Total	Univ. of Minn.	Other Institutions	Total	Univ. of Minn.	Other Institutions	Total
0.00-0.49	28	20	48	14	11	35	27	12	39	79	43	122
0.50-1.49	18	10	28	9	7	16	16	21	37	43	38	81
1.50-2.49	13	10	23	12	9	21	14	27	41	39	46	85
2.50-3.49	13	15	28	6	6	14	11	11	22	32	32	64
3.50-5.49	19	11	30	11	11	22	15	19	34	45	41	86
5.50-and more	22	73	95	16	31	47	17	26	43	55	130	185
No Information	1	2	3	1	-	1	3	1	4	5	3	8
Totals	114	141	255	81	75	156	103	117	220	298	333	631

[a]Academic experience includes administrative, supervisory, teaching, and research positions as well as service fellowships and assistantships in schools, colleges or universities; Source of Degree refers to holders of one or more Minnesota degrees vs. holders of degrees from other institutions only; Duluth Branch excluded.

TABLE 28. AVERAGE ANNUAL NUMBER OF RESEARCH PAPERS PUBLISHED BY 1950-51 FULL-TIME PROFESSORIAL STAFF MEMBERS AT THE UNIVERSITY OF MINNESOTA, BY RANK AND SOURCE OF DEGREE, FOR THE THREE-YEAR PERIOD 1948-51.[a]

Number of Research Papers	RANK: Professor			Associate Professor			Assistant Professor			All Professorial Ranks		
	Univ. of Minn.	Other Institutions	Total	Univ. of Minn.	Other Institutions	Total	Univ. of Minn.	Other Institutions	Total	Univ. of Minn.	Other Institutions	Total
0.0	21	26	47	22	21	43	53	55	108	96	102	198
0.1-0.5	19	17	36	14	9	23	13	18	31	46	44	90
0.6-1.0	22	22	44	12	15	27	12	20	32	46	57	103
1.1-2.5	17	34	51	16	13	29	14	14	28	47	61	108
2.6-5.0	19	32	51	14	11	25	7	10	17	40	53	93
5.1 or more	16	10	26	3	6	9	4	-	4	23	16	39
Totals	114	141	255	81	75	156	103	117	220	298	333	631

[a]Average annual number of publications obtained by dividing the number of publications of research papers, original journal articles on research projects and other articles (including tape recordings of papers and articles) by the number of years service during the three year period; Source of Degree refers to holders of one or more Minnesota degrees vs. holders of degrees from other institutions only; Duluth Branch excluded.

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TABLE 33. TOTAL PUBLICATIONS INDEX OF 1950-51 FULL-TIME PROFESSORIAL STAFF MEMBERS AT THE UNIVERSITY OF MINNESOTA, BY RANK AND SOURCE OF DEGREE, FOR THE THREE-YEAR PERIOD 1948-51.[a]

Publications Index	RANK											
	Professor			Associate Professor			Assistant Professor			All Professorial Ranks		
	Univ. of Minn.	Other Institutions	Total	Univ. of Minn.	Other Institutions	Total	Univ. of Minn.	Other Institutions	Total	Univ. of Minn.	Other Institutions	Total
0.0	10	12	22	16	9	30	44	36	80	70	62	132
0.1-3.0	15	12	27	12	1	13	15	16	31	42	29	71
3.1-6.0	12	16	28	8	18	26	9	25	34	29	59	88
6.1-9.0	12	12	24	10	4	14	6	7	13	28	23	51
9.1-12.0	8	10	18	11	10	21	7	9	16	26	29	55
12.1-19.0	14	28	42	8	8	16	8	10	18	30	46	76
19.1-29.0	21	26	47	5	11	16	6	9	15	32	46	78
29.1 or more	22	25	47	11	9	20	8	5	13	41	39	80
Totals	114	141	255	81	75	156	103	117	220	298	333	631

[a]The total publications index represents differential weighting of average annual publications obtained by dividing the number of publications in each category by years in service during three year period and summing the weighted averages: books or monographs (9), bulletins, pamphlets, parts of books or monographs (5), research papers, original journal articles, etc. (6), reviews and editorials (2), syllabi, abstracts, etc. (1) and creative works of art and science (5); Source of Degree refers to holders of one or more Minnesota degrees vs. holders of degrees from other institutions only; Duluth Branch excluded.

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TABLE 36. RECEIPT OF SALARY INCREASE WITH PROMOTION FROM RANK OF ASSISTANT PROFESSOR TO RANK OF ASSOCIATE PROFESSOR BY 1950-51 FULL-TIME PROFESSORIAL STAFF MEMBERS AT THE UNIVERSITY OF MINNESOTA, BY RANK AND SOURCE OF DEGREE.[a]

Receipt of Salary Increase Upon Promotion	RANK								
	Professor			Associate Professor			Both Professorial Ranks		
	Univ. of Minn.	Other Institutions	Total	Univ. of Minn.	Other Institutions	Total	Univ. of Minn.	Other Institutions	Total
YES	73	49	122	61	49	110	134	98	232
NO	17	8	25	4	2	6	21	10	31
No Information	-	-	-	1	-	1	1	-	1
Does not apply[b]	24	84	108	15	24	39	39	108	147
Totals	114	141	255	81	75	156	195	216	411

[a]Source of Degree refers to holders of one or more Minnesota degrees vs. holders of degrees from other institutions only; Duluth Branch excluded.

[b]Does not apply indicates that no opportunity was available for a salary increase with the promotion under consideration.

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The individual who instigated the study of inbreeding remained unconvinced, however, and perhaps quite legitimately asserted that this study did not measure the kinds of bad influences, which result from too much inbreeding, such as lack of new ideas, lack of growth and limited perspective.

Faculty Functions, Duties, and Responsibilities

A second type of study of faculty is concerned with what a faculty does--analyses of faculty functions, duties, and responsibilities--frequently referred to as a faculty work load study. I would like to suggest that the periodic collection of faculty work load data is valuable completely aside from the cost study emphasis frequently given it, because it provides an up-to-date picture of what faculty members are doing and a basis for comparison of faculty activities at intervals in the development of the institution.

A good administrator should have a clear picture of the distribution of activities among the staff members of his unit and comparative information about staff members of other units, in order to recognize inequities in assignments and to promote the most efficient utilization of faculty resources that is possible within the philosophy of the institution. This is not to say that a standard should be set up for all college staff members in all departments, but such data can provide a yardstick against which performances that deviate widely from the typical practice of staff members in a particular unit might be studied carefully, to determine whether such deviation is warranted or whether it in fact represents lackadaisical, indifferent, or even lazy performance. Ideally, faculty work load data should be available for other institutions of comparable size and purpose, again not to establish a standard but to provide comparative information on institutional practices and utilization of faculty.

Faculty Work Load Studies

Three comprehensive faculty work load studies have been made at Minnesota since 1940. The first, based on faculty employed at the University during the 1940-41 academic year, was conducted to meet the criticism that a description of faculty loads exclusively in terms of teaching responsibility did not provide an adequate picture of staff activities. A five page information blank, edited and revised according to faculty suggestions, was sent to each faculty member at the end of each quarter of the 1941-42 academic year. Each person was asked to indicate, for each quarter of that year, the amount of time he spent (generally in terms of the number of hours during the quarter) on teaching activities, individual counseling and advising, administrative activities, other kinds of campus activities, research and writing, and off-campus service activities. Separate data were requested for each person's responsibilities for regular day-time classes, for general extension classes, and for correspondence classes. The data were then

analyzed and comparisons made for each of the several colleges of the University.

As might be expected, considerable variation was found in the total work loads reported by the staff members: a fourth of all of the faculty indicated that they spent 40 hours or less per week in all types of services; another fourth described loads that totalled 70 hours or more per week. Marked variations were also found in the different kinds of activities performed by members of the different faculties. The median number of hours worked per week, however, ranged from 55 hours for business administration faculty to 60 hours for members of the General College faculty.

Just as the 1941-42 study of faculty activities had been suggested by President Coffey, the 1950-51 load study was initiated by President J. L. Morrill, who sensed the inevitability of budget retrenchment as a result of the Korean situation. He believed a comprehensive study of faculty activities would be helpful in appraising programs, in evaluating or equalizing faculty work loads, and in documenting needs to the Board of Regents and the legislature. The forms and procedures used in the 1941-42 study were adopted and modified slightly for the study. This made it possible to collect the information and make analyses within two months after the study was proposed.

To validate the time estimates given by faculty members for their activities in the questionnaire study, a sample of these persons was asked to keep diaries or day-to-day accounts of their activities for a prescribed period of time during subsequent quarters. Analysis of these reports showed very close agreement with the estimates which the faculty members had made on the survey forms and the results seemed to substantiate the ability of individuals to estimate the allocation of time accurately. The summary report of the 1950-51 faculty load study at Minnesota and the multitude of tabulations resulting from the analysis of these data are available in the reference library, for those of you who are interested.

Differences in Faculty Activities

A third study of faculty load at Minnesota emerged as a substudy using the data collected in the California-Western Conference Cost and Statistical Study. Inasmuch as this project was intended primarily to collect cost data, the method of data collection was considerably different from that used in the two previous studies. In order to facilitate conversion of time spent by faculty members on certain activities into the dollar amounts representing the cost of those activities to the institution, data were collected showing the percentage of time which each faculty member spent on a list of major activities usually performed by college teachers.

(Out of curiosity the figures thus obtained were compared with the figures obtained in the earlier 1941-42 and 1950-51 faculty load studies.

The proportions of time reportedly spent on various activities by the faculties in the three studies seldom differed by more than five per cent, when the data from the earlier studies were converted from number of hours per week to percentages of the total number of hours worked per week. In one college, for example, the 1941-42 study indicated that the median proportion of faculty time spent on teaching was 49.9 per cent. This figure compares with 46.2 per cent for the 1950-51 study and 54.5 per cent for the 1954-55 study. The three figures for administrative activities were 8.6, 3.0, and 2.6 per cents, respectively, for the three studies in chronological order, and for public and professional services the figures were 8.7 per cent, 11.0 per cent, and 6.5 per cent. Another analysis for this particular college faculty indicated that the percentages of staff who participated in no research during the years under study were 47.6, 47.3, and 46.9, respectively. Although additional comparative studies have not yet been completed, the initial impression is that, even with the variability expected due to changes in personnel and programs, the data gathered in the two ways described provide essentially the same kind of results.)

Tables B-1, B-2, and B-3 in your study materials illustrate one way of presenting load statistics taken from cost study data. They provide a picture of the relative activity of members of the academic ranks in three selected colleges, in terms of the proportions of their time spent on teaching, research, administration, and public and professional services.

Comparisons of staff activities between ranks and between colleges can be made more easily, however, if summary data are pulled together for specific functions and specific allocations of time to these functions. Table B-1 illustrates one kind of comparison that was made for discussion at a college faculty meeting. The differential functions of the three different types of colleges--Education, Agriculture, and Science, Literature, and the Arts--are clearly reflected by the proportions of staff time spent among teaching, research, and public and professional services. For instance, very little difference is found between the proportions of full professors in SLA and Education that spend 50 per cent or more of their time teaching, but there is a marked difference between the professors in these two colleges and the professors in the College of Agriculture in this respect. In contrast, the participation in research of professors in the College of Agriculture is much greater than that of the professors in the other two colleges. The right hand column headed Public and Professional Services for the Professor group indicate that professors in the Colleges of Education and Agriculture devote much more time to public and professional services than do SLA professors. Similar comparisons of the activities of members of the other ranks of the three colleges are also quite informative.

Table B-1

A COMPARATIVE DISTRIBUTION OF FACULTY TIME

Education, SLA & Agriculture

	Teaching 50% or more time			Research 5% or less time			Public & Prof. Serv. More than 10% time		
	Educ.	Agric.	SLA	Educ.	Agric.	SLA	Educ.	Agric.	SLA
Professor	56.6	11.5	53.5	69.7	13.1	32.1	52.2	45.9	11.9
Assoc. Professor	57.2	19.5	78.3	64.3	17.0	37.8	42.8	51.2	6.7
Asst. Professor	54.6	31.0	90.0	63.7	40.4	39.4	27.3	26.2	4.5
Instructor	50.0	37.4	76.7	93.7	53.2	71.4	12.5	9.4	1.8
TOTAL	54.7	22.7	73.6	73.5	27.8	43.2	36.0	35.8	6.8

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Table B-2 SUMMARY OF MEAN PER CENTS OF TIME SPENT BY FACULTY MEMBERS ON TEACHING ACTIVITIES, TABULATED BY TYPE AND LEVEL OF INSTRUCTION AND BY RANK, FOR THREE SELECTED COLLEGES - ACADEMIC YEAR 1954-55.

		Rank											
		Teach. Ass'ts.		Instructor		Asst. Prof.		Assoc. Prof.		Professor		All Ranks	
Type	Level	% of Full Time	% of Tchg. Time	% of Full Time	% of Tchg. Time	% of Full Time	% of Tchg. Time	% of Full Time	% of Tchg. Time	% of Full Time	% of Tchg. Time	% of Full Time	% of Tchg. Time
College A													
All Types	Lower	38.1	90.9	35.3	75.8	24.5	42.9	12.6	27.2	6.4	18.1	25.8	57.8
	Upper	3.2	7.6	7.3	15.7	20.5	35.9	18.1	39.0	12.8	36.2	10.6	23.8
	Graduate	0.6	1.5	4.0	8.5	12.1	21.2	15.7	33.8	16.2	45.7	8.2	18.4
Lect. & Disc.	All levels	26.5	63.2	43.2	92.7	50.8	89.0	40.1	86.4	32.0	90.4	37.1	83.2
Laboratory	All levels	15.4	36.8	3.4	7.3	6.3	11.0	6.3	13.6	3.4	9.6	7.5	16.8
All Types	All levels	41.9	100.0	46.6	100.0	57.1	100.0	46.4	100.0	35.4	100.0	44.6	100.0
College B													
All Types	Lower	27.5	65.8	42.4	61.3	26.0	44.1	16.6	29.2	9.1	23.6	25.0	49.0
	Upper	13.1	31.3	25.0	36.2	27.2	46.1	29.4	51.6	16.0	41.4	20.3	39.8
	Graduate	1.2	2.9	1.7	2.5	5.8	9.8	10.9	19.2	13.5	35.0	5.7	11.2
Lect. & Disc.	All levels	10.4	24.9	37.2	53.8	34.1	57.8	39.7	69.8	30.4	78.8	27.1	53.1
Laboratory	All levels	31.4	75.1	31.9	46.2	24.9	42.2	17.2	30.2	8.2	21.2	23.9	46.9
All Types	All levels	41.8	100.0	69.1	100.0	59.0	100.0	56.9	100.0	38.6	100.0	51.0	100.0
College C													
All Types	Lower	2.8	100.0	43.2	75.8	44.1	65.5	36.9	52.8	25.7	44.8	40.0	64.1
	Upper	0.0	0.0	13.8	24.2	23.2	34.5	33.0	47.2	30.4	53.0	22.3	35.7
	Graduate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	2.2	0.1	0.2
Lect. & Disc.	All levels	0.0	0.0	31.8	55.8	48.0	71.3	59.0	84.4	46.4	80.8	43.9	70.4
Laboratory	All levels	2.8	100.0	25.2	44.2	19.3	28.7	10.9	15.6	11.0	19.2	18.5	29.6
All Types	All levels	2.8	100.0	57.0	100.0	67.3	100.0	69.9	100.0	57.4	100.0	62.4	100.0

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Table B-3 NUMBER AND PER CENT OF FULL-TIME ACADEMIC STAFF MEMBERS IN COLLEGE B, DEVOTING SPECIFIED PROPORTIONS OF TIME TO VARIOUS FUNCTIONS, ARRANGED ACCORDING TO RANK

Rank (by per cent of time)	Function																	
	Teaching		Dept. Research		Org.&Spons. Research		Total Research		Dept. Admin.		General Admin.		Pub.&Prof. Services		Student Services	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Professor																
0%	1	6.2	14	87.5	16	100.0	14	87.5	4	25.0	6	37.5	11	68.8	16	100.0
1-5%	0	-	1	6.2	0	-	1	6.2	1	6.3	4	25.0	3	18.8	0	-
6-10%	1	6.2	0	-	0	-	0	-	4	25.0	0	-	1	6.2	0	-
11-20%	1	6.2	0	-	0	-	0	-	2	12.5	2	12.5	0	-	0	-
21-49%	3	18.8	1	6.3	0	-	1	6.3	4	25.0	2	12.5	1	6.2	0	-
50-79%	5	31.3	0	-	0	-	0	-	0	-	0	-	0	-	0	-
80-100%	5	31.3	0	-	0	-	0	-	1	6.2	2	12.5	0	-	0	-
Total	16	100.0	16	100.0	16	100.0	16	100.0	16	100.0	16	100.0	16	100.0	16	100.0
Assoc. Prof.																
0%	0	-	11	84.6	12	92.3	11	84.6	6	46.1	11	84.6	10	76.9	13	100.0
1-5%	0	-	0	-	0	-	0	-	1	7.7	2	15.4	2	15.4	0	-
6-10%	0	-	1	7.7	0	-	0	-	5	38.5	0	-	1	7.7	0	-
11-20%	1	7.7	0	-	0	-	0	-	0	-	0	-	0	-	0	-
21-49%	0	-	1	7.7	0	-	1	7.7	1	7.7	0	-	0	-	0	-
50-79%	2	15.4	0	-	1	7.7	0	-	0	-	0	-	0	-	0	-
80-100%	10	76.9	0	-	0	-	1	7.7	0	-	0	-	0	-	0	-
Total	13	100.0	13	100.0	13	100.0	13	100.0	13	100.0	13	100.0	13	100.0	13	100.0
Ass't Prof.																
0%	0	-	51	94.4	53	98.1	50	92.6	45	83.3	53	98.1	52	96.3	50	92.6
1-5%	0	-	2	3.7	0	-	2	3.7	1	1.9	1	1.9	2	3.7	2	3.7
6-10%	1	1.9	1	1.9	1	1.9	2	3.7	3	5.5	0	-	0	-	0	-
11-20%	0	-	0	-	0	-	0	-	3	5.5	0	-	0	-	0	-
21-49%	0	-	0	-	0	-	0	-	1	1.9	0	-	0	-	1	1.9
50-79%	10	18.5	0	-	0	-	0	-	1	1.9	0	-	0	-	0	-
80-100%	43	79.6	0	-	0	-	0	-	0	-	0	-	0	-	1	1.8
Total	54	100.0	54	100.0	54	100.0	54	100.0	54	100.0	54	100.0	54	100.0	54	100.0

John E. Stecklein

College B, continued

Rank (by per cent of time)	Function															
	Teaching		Dept. Research		Org.&Spons. Research		Total Research		Dept. Admin.		General Admin.		Pub.&Prof. Services		Student Services	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Instructor																
0%	0	-	26	100.0	26	100.0	26	100.0	26	100.0	26	100.0	26	100.0	25	96.2
1-5%	1	3.8	0	-	0	-	0	-	0	-	0	-	0	-	0	-
6-10%	1	3.8	0	-	0	-	0	-	0	-	0	-	0	-	0	-
11-20%	1	3.8	0	-	0	-	0	-	0	-	0	-	0	-	0	-
21-49%	1	3.8	0	-	0	-	0	-	0	-	0	-	0	-	0	-
50-79%	5	19.3	0	-	0	-	0	-	0	-	0	-	0	-	0	-
80-100%	17	65.5	0	-	0	-	0	-	0	-	0	-	0	-	1	3.8
Total	26	100.0	26	100.0	26	100.0	26	100.0	26	100.0	26	100.0	26	100.0	26	100.0
All Ranks																
0%	1	0.9	102	93.6	107	98.2	101	92.7	81	74.3	96	88.2	99	90.9	104	95.5
1-5%	1	0.9	3	2.8	0	-	3	2.8	3	2.8	7	6.4	7	6.4	2	1.8
6-10%	3	2.8	2	1.8	1	0.9	2	1.8	12	11.0	0	-	2	1.8	0	-
11-20%	3	2.8	0	-	0	-	0	-	5	4.6	2	1.8	0	-	0	-
21-49%	4	3.7	2	1.8	0	-	2	1.8	6	5.5	2	1.8	1	0.9	1	0.9
50-79%	22	20.1	0	-	1	0.9	0	-	1	0.9	0	-	0	-	0	-
80-100%	75	68.8	0	-	0	-	1	0.9	1	0.9	2	1.8	0	-	2	1.8
Total	109	100.0	109	100.0	109	100.0	109	100.0	109	100.0	109	100.0	109	100.0	109	100.0

Administrative Unit, Bureau of Institutional Research
University of Minnesota, 10/57

Amount, Level, and Types of Teaching Duties

Equating the results of this analysis to those from still another method of studying faculty load, i.e., from data collected routinely as an inventory of courses and faculty teaching assignments, produces some intriguing figures. Among such figures are these, based on a preliminary study for one college of the University: For each clock hour of class assigned to him the full professor spends 4.8 per cent of his total professional time. This percentage includes time spent upon class preparation, class meetings, grading papers, and student advising connected with the course. In comparison, the associate professor spends 4.9 per cent and the assistant professor 5.6 per cent of his total professional time, respectively. As one might expect, the allocation of time increases as the level of instruction goes up. The full professor in this college, for example, spends, on the average, 4.4 per cent of his time per clock hour for lower division instruction compared with 4.7 per cent and 5.9 per cent per clock hour for instruction at the upper division and graduate levels, respectively. If such figures can be developed and validated over a period of years, administrators will be much better prepared to weight the various responsibilities assigned to their staff members, and to judge relative efficiency.

Faculty Attraction and Retention

I would like to discuss institutional research on staffing problems by describing what I consider to be a prime example of effective utilization by the faculty of our Bureau. In 1957 the members of the Senate Committee on Education found themselves involved in an earnest discussion of the problems of recruiting and holding competent faculty members during the next five or ten years. As a result of this discussion, a subcommittee was appointed to study faculty attraction and retention and the Bureau was asked for assistance. After a preliminary meeting of the subcommittee and the director of the Bureau, the director was asked to bring to the subcommittee specific recommendations for the proposed study. Members of the Bureau staff then drew up a tentative research design which was thoroughly discussed, modified, and approved in outline form by the subcommittee. Four groups of present and prospective faculty members of the University were recommended for careful study, to identify factors which are most influential in causing prospective faculty members to accept or reject invitations to come to the University, or in causing present faculty members to leave or stay at the University. The two groups of on-campus staff members--individuals who had joined the full-time faculty for the first time within the past two years, and individuals who had turned down offers to take positions elsewhere within the past two years--would be studied by intensive interviews. The other two groups--persons who had left the University within the past two years to take positions elsewhere and individuals who had turned down job offers from the University of Minnesota--would be studied by questionnaire techniques.

After the four groups had been defined, members of the Bureau staff developed the questionnaires and interview guides, using comments and suggestions of members of the advisory committee. The Bureau then distributed the forms and conducted the interviews, and analyzed the data collected. Members of the Bureau staff wrote up a rough draft report which was sent to the individual committee members for their review, comments, and criticism. The report is now being revised in the light of these criticisms and a final report is expected early this fall. Incidentally, I believe that you will be interested in the way in which the relationship of the subcommittee and its responsibility for a report, and the Bureau staff and its responsibility for a report, was worked out. It was agreed that members of the Bureau staff would write a complete report covering all four phases of the study, including a section called conclusions and implications. The subcommittee, on the other hand, using a preliminary draft of the findings, would write a separate paper consisting entirely of recommendations concerning faculty attraction and retention, supporting their recommendations with findings from the studies. The committee's report will be distributed to all faculty members and administrators in the University and will be available to other interested parties. Similarly, the Bureau's report will be available to any faculty member or other person who is interested in studying the complete findings.

I can only give you a brief preview of the outcomes of these studies but I thought you would be interested in a few of the findings. One of the questions asked concerned differences between salaries offered in positions taken elsewhere and salaries of positions at the University. We found that individuals who left the University (and this population was restricted to staff members whom the deans and department heads would most like to have kept on their staff, in order to exclude persons whom the department heads might have released anyhow) took positions elsewhere with salary increases averaging 21 per cent over the salaries which they had received, or had reason to believe they would have received, at the University if they had stayed. One-fourth of the respondents indicated salary increases exceeding 30 per cent. On the other hand, that salary is not the whole issue is reflected by the fact that 41 per cent of those who turned down offers to come to Minnesota accepted jobs elsewhere paying as much as 20 per cent less than the Minnesota offer.

When asked to identify the factors which were most influential in their decision to come to the University or to stay at the University, the most frequently cited factor was the prestige of the institution and reputation of the staff members. The matter of salary was mentioned as important but was not the top factor in any instance. Better opportunity for advancement and better distribution of working responsibilities were also listed high among the factors influencing a change to other institutions or a change to the University of Minnesota, while climate, the metropolitan setting of the University, and the proximity of friends and relatives played a minor role in the decisions of nearly all of the individuals studied. The importance of the attitude of the department

head or dean was brought out strikingly, too, in several of the questionnaire responses and interview replies, either as such attitudes increased the person's incentive to leave the institution or as they conveyed appreciation and respect for the individual's work--often all that was needed to cause a person to turn down an offer to go elsewhere. If any of you are interested in further details of the study, copies of the report will be sent to you upon request when they are made available this fall.

These, in brief, are the kinds of research studies we have done about the University of Minnesota faculty. In the next chapter, I will review some studies the Bureau has done on behalf of individual faculty members, departments, and colleges of the University.